Atty. Dkt. No. 080542-0158

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Masaki IIJIMA et al.

Title: COAL DRYING METHOD AND EQUIPMENT, METHOD FOR AGING REFORMED COAL AND AGED REFORMED COAL, AND PROCESS AND SYSTEM FOR PRODUCING REFORMED COAL

Prior Appl. No.: 09/561,347

Prior Appl. Filing Date: 04/28/1998

Examiner: Unassigned

Art Unit: 1764

PRELIMINARY AMENDMENT

Commissioner for Patents
Box PATENT APPLICATION
Washington, D.C. 20231

Sir:

Prior to examination of the present Continuing Application, Applicant respectfully requests that the application be amended as follows:

In the Specification:

Please amend the specification as follows:

After the Application Title, please insert:

This is a Divisional Application of Application No. 09/561,347, filed 4/28/2000; which is in turn a Divisional Application of Application No. 09/045,792, filed 3/23/1998.

In the Claims:

Please cancel claims 1 – 5, 7, 8, 10, and 11.

In accordance with 37 C.F.R. § 1.21, please substitute for claims 9, 12, 16, and 17 the following rewritten version of the same claims, as amended. The changes are shown explicitly in the attached "Version with Markings to Show Changes Made."

9. (Once Amended) A method for aging reformed coal produced by heating medium-quality or low-quality coal to a temperature of 180 to less than 300°C and then cooling it to a temperature of 150°C or below or by heating medium-quality or low-quality coal to a temperature of 300 to 500°C at a heating rate of not less than 100°C per minute and then cooling it to a temperature of 250°C or below at a cooling rate of not less than 50°C per minute, which comprises storing the reformed coal for 1 month or more under any of the following atmospheres (a) or (b):
(a) An atmosphere having an oxygen concentration of not greater than 12% by volume and a temperature of 100°C or below;
(b) An atmosphere having an oxygen concentration of not greater than 21% by volume and a temperature of 70°C or below.

12. (Once Amended) Aged reformed coal obtained by heating medium-quality or low-quality coal to a temperature of 180 to less than 300°C and then cooling it to a temperature of 150°C or below or by heating medium-quality or low-quality coal to a temperature of 300 to 500°C at a heating rate of not less than 100°C per minute and then cooling it to a temperature of 250°C or below at a cooling rate of not less than 50°C per minute; and storing the resulting reformed coal for 1 month or more under any of the following atmospheres (a) or (b):
(a) An atmosphere having an oxygen concentration of not greater than 12% by volume and a temperature of 100°C or below;
(b) An atmosphere having an oxygen concentration of not greater than 21% by volume and a temperature of 70°C or below.

16. (Once Amended) A process for producing reformed coal as claimed in claim 13 wherein the medium-quality or low-quality coal is cooled by using exhaust gas obtained at the outlet of an electrostatic precipitator included in said coal-fired boiler equipment or at a point downstream thereof, or a gaseous mixture composed of the exhaust gas and air.

17. (Once Amended) A process for producing reformed coal as claimed in claim 13 wherein said coal-fired boiler is equipped with a coal-fired auxiliary furnace, and hot combustion exhaust gas from said auxiliary furnace is used in admixture with combustion exhaust gas obtained at the outlet of said economizer or at a point downstream thereof.

REMARKS

Applicant respectfully requests that the foregoing amendments be made prior to examination of the present application. The amendments to claims 16 and 17 are made to correct multiple dependencies and do not change the scope of the invention.

After amending the claims as set forth above, claims 6, 9, and 12 - 26 are now pending in this application.

Respectfully submitted,

Date January 24, 2002

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MARKED UP VERSION OF CLAIMS

9. (Once Amended) A method for aging reformed coal produced by heating medium-quality or low-quality coal to a temperature of 180 to less than 300°C and then cooling it to a temperature of 150°C or below or by heating medium-quality or low-quality coal to a temperature of 300 to 500°C at a heating rate of not less than 100°C per minute and then cooling it to a temperature of 250°C or below at a cooling rate of not less than 50°C per minute, which comprises storing the reformed coal for 1 month or more under any of the following atmospheres (a) or (b)[.]:

(a) An atmosphere having an oxygen concentration of not greater than 12% by volume and a temperature of 100°C or below[.];

(b) An atmosphere having an oxygen concentration of not greater than 21% by volume and a temperature of 70°C or below.

12. (Once Amended) Aged reformed coal obtained by heating medium-quality or low-quality coal to a temperature of 180 to less than 300°C and then cooling it to a temperature of 150°C or below or by heating medium-quality or low-quality coal to a temperature of 300 to 500°C at a heating rate of not less than 100°C per minute and then cooling it to a temperature of 250°C or below at a cooling rate of not less than 50°C per minute; and storing the resulting reformed coal for 1 month or more under any of the following atmospheres (a) or (b)[.]:

(a) An atmosphere having an oxygen concentration of not greater than 12% by volume and a temperature of 100°C or below[.];

(b) An atmosphere having an oxygen concentration of not greater than 21% by volume and a temperature of 70°C or below.

16. (Once Amended) A process for producing reformed coal as claimed in [any of claims 13 to 15] claim 13 wherein the medium-quality or low-quality coal is cooled by using exhaust gas obtained at the outlet of an electrostatic precipitator included in said coal-fired boiler equipment or at a point downstream thereof, or a gaseous mixture composed of the exhaust gas and air.

17. (Once Amended) A process for producing reformed coal as claimed in [any of claims 13 to 15] claim 13 wherein said coal-fired boiler is equipped with a coal-fired auxiliary furnace, and hot combustion exhaust gas from said auxiliary furnace is used in admixture with combustion exhaust gas obtained at the outlet of said economizer or at a point downstream thereof.